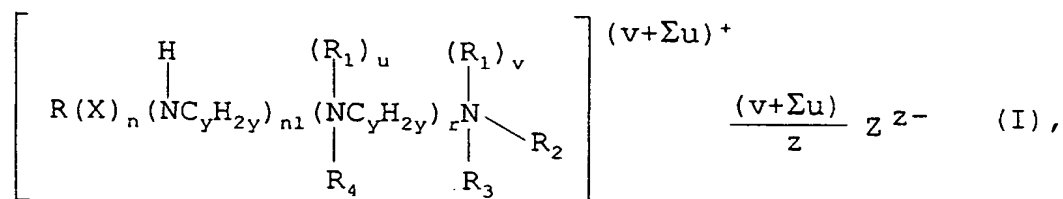


## C L A I M S

1. Use of a quaternary ammonium glycoside surfactant containing at least one hydrocarbon group with 6-24 carbon atoms and at least one quaternary ammonium group where at least one substituent is an alkyleneoxy containing group which is connected to a saccharide residue by a glycosidic bond, as an adjuvant for pesticides and fertilisers.
2. Use of a quaternary ammonium glycoside surfactant according to claim 1, where the substituent has the formula  $(AO)_s(G)_p$ , where AO is an alkyleneoxy group with 2-4 carbon atoms, G is a saccharide residue, p is a number from 1 to 10 and s is a number from 1-15.
3. Use according to claim 1 or 2 of a quaternary ammonium glycoside surfactant, where the surfactant has the formula

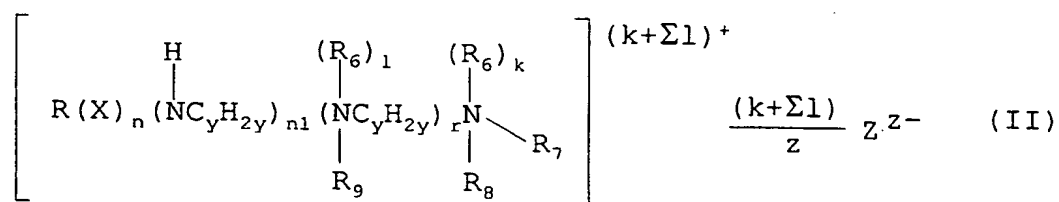


- where R is an aliphatic group with 6-24 carbon atoms;  $R_1$  is an aliphatic group with 1-4 carbon atoms or  $(AO)_s(G)_p$ ;  $R_2$ ,  $R_3$  and  $R_4$  independently are a group  $(AO)_s(G)_p$ , an aliphatic group with 1-24 carbon atoms or a hydroxyalkyl group with 2-4 carbon atoms; AO is an alkyleneoxy group with 2-4 carbon atoms; s is 0-15 and  $\sum s = 1-30$ ; G is a saccharide residue which is connected to the rest of the molecule by a glycosidic bond and p (the degree of polymerisation) is 0-10;  $\sum p = 1-20$ ;  $r = 0-3$ ;  $y = 2-3$ ; X = CO or  $\text{COO}(AO)_t(\text{C}_q\text{H}_{2q})$  or  $\text{O}(AO)_t(\text{C}_q\text{H}_{2q})$ ;  $n = 0$  or 1;  $n_1$  is 0 except when X is CO, then  $n_1$

27

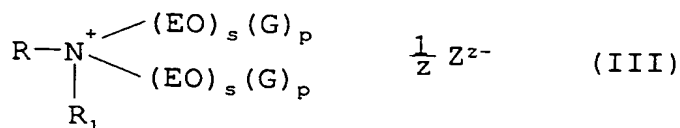
is 1;  $q = 2-4$ ;  $t = 0-4$ ;  $u = 0$  or  $1$  and  $v = 0$  or  $1$ , provided that the sum  $(v + \sum u)$  is  $1-3$ ;  $Z$  is an anion and  $z$  is the charge of the anion  $Z$ .

4. Use according to claim 3, where the quaternary ammonium glycoside surfactant is present in a mixture with a quaternary ammonium compound having the formula



- 10 where  $\text{R}_6$  is independently an aliphatic group with 1-4 carbon atoms or  $-\text{CH}_2\text{CH}_2\text{OH}$ ;  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  independently are a group  $(\text{AO})_s$ , an aliphatic group with 1-24 carbon atoms or a hydroxyalkyl group with 2-4 carbon atoms;  $l = 0$  or  $1$  and  $k = 0$  or  $1$ , provided that the sum  $(k + \sum l)$  is  $1-3$ ; and  $\text{R}$ ,  $\text{AO}$ ,  $s$ ,  $\text{X}$ ,  $n$ ,  $n_1$ ,  $y$ ,  $r$ ,  $Z$  and  $z$  have the same meaning as in claim 3, in a weight ratio  $1:3-9:1$ .

5. Use according to claim 3, where the quaternary ammonium glycoside surfactant has the formula

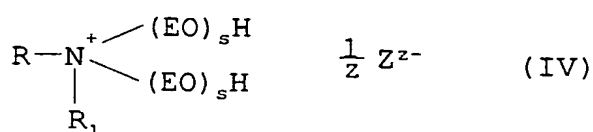


20

where  $\text{R}$  is an aliphatic group with 6-24 carbon atoms;  $\text{R}_1$  is an aliphatic group with 1-4 carbon atoms or the group  $\text{C}_2\text{H}_4\text{O}(\text{G})_p$ ;  $\text{G}$  is a saccharide residue that is connected to the

polyethyleneoxy chain by a glycosidic bond and p (the degree of polymerisation) is 0-10;  $\Sigma p$  is 1-15; EO is an ethyleneoxy group; s is 0-12;  $\Sigma s$  is 2-15; Z and z have the meaning mentioned in formula I in claim 3.

- 5 6. Use according to claim 5, where the quaternary ammonium glycoside surfactant is present in a mixture with a quaternary ammonium compound having the formula



- 10 where R, R<sub>1</sub>, EO, Z, z and s, have the same meaning as in formula III in claim 5, except that p in the group R<sub>1</sub> is 0, in a weight ratio 1:3-9:1.

7. Use according to claim 3, where X = O(AO)<sub>t</sub>(C<sub>q</sub>H<sub>2q</sub>) where q is 3; n = 1; r = 0 and v = 1.

- 15 8. Use according to claim 7 where the quaternary ammonium glycoside is present in a mixture with a quaternary ammonium compound according to claim 4, where X = O(AO)<sub>t</sub>(C<sub>q</sub>H<sub>2q</sub>) where q is 3; n = 1; r = 0; and k = 1, in a weight ratio 1:3-9:1.

9. Use according to claim 3, where n = 0; n<sub>1</sub> = 0; r = 1; y = 3; u = 1 and v = 1.

- 20 10. Use according to claim 9, where the quaternary ammonium glycoside is present in a mixture with a quaternary ammonium compound according to claim 4, where n = 0; n<sub>1</sub> = 0; r = 1; y = 3; k = 1 and l = 1, in a weight ratio 1:3-9:1.

- 25 11. Use according to any of the preceding claims 1-10 where the quaternary ammonium glycoside surfactant or the mixture is used as an adjuvant for a herbicide.

12. Use according to claim 11, where the herbicide is glyphosate or a salt thereof.

13. A formulation characterised in that it contains a pesticide or a fertiliser and an active amount of a quaternary ammonium glycoside surfactant as disclosed in any of claims 1-3, 5, 7 or 9.

5 14. A formulation in accordance with claim 13 characterised in that the amount of quaternary ammonium glycoside surfactant is between 20-200% by weight calculated on the amount of pesticide or fertiliser present in the formulation.

10 15. A pesticide formulation in accordance with claim 13, characterised in that it contains 0.01-99.9% by weight of a pesticide, 0-40% by weight of ammonium sulphate and an amount of 0.01-70% by weight of a mixture in accordance with claims 4, 6, 8 or 10.

15 16. A formulation according to claim 15, characterised in that the formulation is in liquid form and that the pesticide is glyphosate or a salt thereof, which is present in an amount of 0.02-70% by weight.

20 17. Use according to any of the preceding claims 1-10 where the quaternary ammonium glycoside surfactant or the mixture is used as an adjuvant for a fertiliser.

18. A fertiliser formulation in accordance with claim 13 characterised in that it contains 0.0001-99.9% by weight of a fertiliser and an amount of 0.0001-70% by weight of a mixture in accordance with claim 4, 6, 8 or 10.